

5763

5763

VHF BEAM POWER AMPLIFIER

9-PIN MINIATURE TYPE

GENERAL DATA

Electrical:

Heater, for Unipotential Cathode:

Voltage	6.0	ac or dc volts
Current	0.75	amp
Transconductance for plate current of 45 ma.	7000	µmhos
Mu-Factor, Grid No.2 to Grid No.1	16	

Direct Interelectrode Capacitances:°

Grid No.1 to Plate	0.3 max.	µµf
Input	9.5	µµf
Output	4.5	µµf

° With no external shield.

Mechanical:

Mounting Position	Any
Maximum Overall Length	2-5/8"
Maximum Seated Length	2-3/8"
Length, Base Seat to Bulb Top (excluding tip)	2" ± 3/32"
Maximum Diameter	7/8"
Bulb	T-6-1/2
Base	Small-Button Noval 9-Pin
Basing Designation for BOTTOM VIEW	9K

Pin 1 - Plate
Pin 2 - No Connection
Pin 3 - Grid No.3
Pin 4 - Heater
Pin 5 - Heater
Pin 6 - Grid No.2
Pin 7 - Cathode
Pin 8 - Grid No.1
Pin 9 - Grid No.1

RF POWER AMPLIFIER & OSCILLATOR - Class C Telegraphy°°

and

RF POWER AMPLIFIER - Class C FM Telephony

Maximum CCS• Ratings, *Absolute Values*:

DC PLATE VOLTAGE	300 max.	volts
DC GRID-No.3 (SUPPRESSOR) VOLTAGE	0 max.	volts
DC GRID-No.2 (SCREEN) VOLTAGE	250 max.	volts
DC GRID-No.1 (CONTROL-GRID) VOLTAGE	-125 max.	volts
DC PLATE CURRENT	50 max.	ma
DC GRID-No.2 CURRENT	15 max.	ma
DC GRID-No.1 CURRENT	5 max.	ma
PLATE INPUT	15 max.	watts
GRID-No.2 INPUT	2 max.	watts
PLATE DISSIPATION	12 max.	watts

• °°: See next page.



5763

VHF BEAM POWER AMPLIFIER

PEAK HEATER-CATHODE VOLTAGE:		
Heater negative with respect to cathode.	100 max.	volts
Heater positive with respect to cathode.	100 max.	volts
BULB TEMPERATURE AT HOTTEST POINT ON BULB SURFACE	250 max.	°C

Typical Operation at 50 Mc:

DC Plate Voltage	300	volts
Grid No.3.	Connected to cathode at socket	
DC Grid-No.2 Voltage	250	volts
DC Grid-No.1 Voltage⊕	-60	volts
	22000	ohms
Peak RF Grid-No.1 Voltage.	80	volts
DC Plate Current	50	ma
DC Grid-No.2 Current	5	ma
DC Grid-No.1 Current (Approx.)	3	ma
Driving Power (Approx.).	0.35	watt
Power Output (Approx.)°.	8	watts

FREQUENCY MULTIPLIER

Maximum CCS● Ratings, *Absolute Values*:

DC PLATE VOLTAGE	300 max.	volts
DC GRID-No.3 (SUPPRESSOR) VOLTAGE.	0 max.	volts
DC GRID-No.2 (SCREEN) VOLTAGE.	250 max.	volts
DC GRID-No.1 (CONTROL-GRID) VOLTAGE. . . .	-125 max.	volts
DC PLATE CURRENT	50 max.	ma
DC GRID-No.2 CURRENT	15 max.	ma
DC GRID-No.1 CURRENT	5 max.	ma
PLATE INPUT.	15 max.	watts
GRID-No.2 INPUT.	2 max.	watts
PLATE DISSIPATION.	12 max.	watts
PEAK HEATER-CATHODE VOLTAGE:		
Heater negative with respect to cathode.	100 max.	volts
Heater positive with respect to cathode.	100 max.	volts
BULB TEMPERATURE AT HOTTEST POINT ON BULB SURFACE	250 max.	°C

Typical Operation:

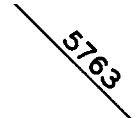
	Doubler to 175 Mc	*Tripler to 175 Mc*	
DC Plate Voltage	300	300	volts
Grid No.3.	Connected to cathode at socket		
DC Grid-No.2 Voltage	*	*	volts

□□ Key down conditions per tube without amplitude modulation. Modulation essentially negative may be used if the positive peak of the audio-frequency envelope does not exceed 115% of the carrier conditions.

° Useful power output is approximately 7 watts.

●,⊕,*: See next page.





5763

VHF BEAM POWER AMPLIFIER

	Doubler to 175 Mc	*Tripler to 175 Mc*	
DC Grid-No.1 Voltage⊕	-75	-100	volts
	75000	100000	ohms
Peak RF Grid-No.1 Voltage	95	120	volts
DC Plate Current	40	35	ma
DC Grid-No.2 Current	4	5	ma
DC Grid-No.1 Current (Approx.)	1	1	ma
Driving Power (Approx.)	0.6	0.6	watt
Power Output (Approx.)#	3.6	2.8	watts

Maximum Circuit Values (for maximum rated conditions):

Grid-No.1-Circuit Resistance . . . . 0.1 max. megohm

CHARACTERISTICS RANGE VALUES FOR EQUIPMENT DESIGN

	Note	*Min.*	*Max.*	
Heater Current	1	0.69	0.81	amp
Grid No.1-Plate Capacitance♦	-	-	0.3	μμf
Input Capacitance♦	-	8.0	11.0	μμf
Output Capacitance♦	-	3.8	5.2	μμf

♦ With no external shield.

Note 1: With 6 volts ac on heater.

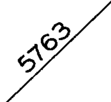
● Continuous Commercial Service.

⊕ Obtained from a fixed supply, or by a grid-No.1 resistor of value shown.

\# Useful power output is approximately 2.1 watts for doubler service and 1.3 watts for tripler service.

* Obtained from plate supply voltage of 300 volts through a series resistor of 12500 ohms.

TUBE DEPARTMENT
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY





5763

AVERAGE CHARACTERISTICS

E_f=6.0 VOLTS DC
GRID-Nº2 VOLTS=250
GRID-Nº3 VOLTS=0

GRID-Nº1 (I_{C1}) MILLIAMPERES

60 40 20 0

GRID-Nº1 VOLTS E_{C1}=0

E_{C1}=+15 +10 +5 -5 -7.5 -10 -15

I_b I_{C1} I_{C2}

PLATE VOLTS

0 50 100 150 200 250 300 350 400 450 500

300 250 200 150 100 50

PLATE (I_b) OR GRID-Nº2 (I_{C2}) MILLIAMPERES



5763

5763

AVERAGE PLATE CHARACTERISTICS
WITH E_{C2} AS VARIABLE

E_f=6.0 VOLTS DC
GRID-№1 VOLTS=0
GRID-№3 VOLTS=0

GRID-№2 VOLTS E_{C2}=150

E_{C2}=250
200
100

PLATE VOLTS: 0, 50, 100, 150, 200, 250, 300, 350

PLATE MILLIAMPERES: 100, 80, 60, 40, 20, 0

JAN. 10, 1949

TUBE DEPARTMENT
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

92CM-7159